AMENDMENTS TO THE CLAIMS:

Please add the new claims 84 to 86 and make the following changes in claims 38, 42 to 45, 49, and 81:

Claims 1 to 37. (canceled)

38. (currently amended) An X-ray opaque glass with a composition, in mol %, consisting of:

SiO_2	75 – [[98]] 92
Yb_2O_3	0.1 – 25
ZrO_2	0 - 24.9.

Claim 39. (canceled)

40. (previously presented) The X-ray opaque glass as defined in claim 38, wherein said Yb_2O_3 is present in an amount of from 0.5 to 15 mol % and said ZrO_2 is present in an amount of from 0.5 to 15 mol %.

41. (previously presented) The X-ray opaque glass as defined in claim 38, wherein said Yb_2O_3 is present in an amount of from 1 to 15 mol %, and said ZrO_2 is present in an amount of from 1 to 15 mol %.

42. (currently amended) A X-ray opaque glass with a composition, in mol %,

consisting of:

SiO_2	75 – [[98]] 92
Yb_2O_3	0.1 – 25
ZrO_2	0 - 24.9
WO_3	0 - 24.9
La_2O_3	0 - 24.9
Nb_2O_5	0 - 24.9
HfO_2	0 - 24.9
Ta_2O_5	0 - 24.9
Gd_2O_3	0 - 24.9
Lu_2O_3	0 - 24.9
Sc_2O_3	0 - 24.9
Y_2O_3	0 - 24.9
F_2	0 - 5.

43. (currently amended) A X-ray opaque glass with a composition, in mol %, consisting of:

SiO_2	75 – [[98]] 92
Yb_2O_3	0.1 – 25
ZrO_2	0 - 24.9
Li_2O	0 - < 10
Na_2O	0 - < 10
K_2O	0 - < 10,

wherein Σ Li_2O+ Na_2O+ K_2O is from 0 to < 10 mol %.

44. (currently amended) A X-ray opaque glass with a composition, in mol %, consisting of:

SiO_2	75 - [[98]] 92

Yb_2O_3	0.1 - 25
ZrO_2	0 – 24.9
MgO	0 – 10
CaO	0 – 10
SrO	0 – 10
BaO	0 – 10
ZnO	0 – 10,

wherein Σ MgO+CaO+SrO+BaO is from 0 to < 10 mol %.

45. (currently amended) A X-ray opaque glass with a composition, in mol %, consisting of:

SiO_2	75 - [[98]] 92
Yb_2O_3	0.1 - 25
ZrO_2	0 - 24.9
TiO_2	0 – 10
GeO_2	0 – 10
P_2O_5	0 – 10,

wherein Σ TiO_2+GeO_2+P_2O_5 is from 0 to < 15 mol %.

46. (previously presented) The X-ray opaque glass as defined in claim 42, containing at most five oxide ingredients.

47. (previously presented) The X-ray opaque glass as defined in claim 42, containing at most four oxide ingredients.

Claim 48. (canceled)

49. (currently amended) A glass powder with a mean grain size of up to 20 μm and a composition, in mol %, consisting of:

SiO_2	75 - [[98]] 92
Yb_2O_3	0.1 - 25
ZrO_2	0 - 24.9.

50. (previously presented) The glass powder as defined in claim 49, and having a silanized surface.

51. (withdrawn) A process of making a glass with a composition as defined in claim 38, said process comprising the steps of:

a) preparing a glass batch from raw material ingredients;

b) charging the glass batch into a melting vessel; and

c) melting the glass batch in the melting vessel at a melting temperature of at least 1500°C;

whereby said glass is formed with said composition as defined in claim 38.

52. (withdrawn) The process as defined in claim 51, wherein said melting temperature is at least 1600°C.

53. (withdrawn) The process as defined in claim 51, wherein said melting vessel comprises solid iridium and/or an alloy containing iridium.

54. (withdrawn) The process as defined in claim 51, further comprising introducing high-frequency electromagnetic radiation into said glass batch in order to aid the melting of the glass batch.

55. (withdrawn) The process as defined in claim 54, wherein said high-frequency electromagnetic radiation has frequencies from 50 kHz to 2 MHz.

56. (withdrawn) The process as defined in claim 51, wherein at least one of said raw material ingredients is present in the glass batch in the form of a nanoscale powder prior to the charging of the glass batch into the melting vessel.

57. (withdrawn) The process as defined in claim 51, wherein at least one of said raw material ingredients is present in the glass batch in the form of a nanoscale powder dispersed and/or dissolved in a solvent, and further comprising introducing said glass batch into a mold and drying said raw material ingredients to form a green body.

58. (withdrawn) The process as defined in claim 57, wherein said drying of said raw material ingredients that were dissolved and/or dispersed and introduced into said mold is carried out with the aid of microwave radiation.

59. (withdrawn) The process as defined in claim 58, wherein said mold comprises a non-wetting material.

60. (withdrawn) The process as defined in claim 59, wherein said non-wetting material is a fluoropolymer.

61. (withdrawn) The process as defined in claim 57, wherein said green body is a single entity or in milled form.

62. (withdrawn) The process as defined in claim 57, further comprising sintering said green body.

63. (withdrawn) The process as defined in claim 62, further comprising at least partially using waste heat produced in said melting for said sintering

64. (withdrawn) The process as defined in claim 57, further comprising milling, dissolving and/or dispersing said green body and subsequently drying to form a compact body.

65. (withdrawn) The process as defined in claim 64, further comprising sintering said compact body.

66. (withdrawn) The process as defined in claim 65, further comprising at least partially using waste heat produced in said melting for said sintering

67. (withdrawn) The process as defined in claim 64, wherein said green body is dissolved and/or suspended in an alkali metal lye or aqueous ammonia.

68. (withdrawn) The process as defined in claim 57, wherein said solvent is an alkali metal lye or aqueous ammonia.

69. (withdrawn) A dental glass consisting of the glass as defined in claim 38.

70. (withdrawn) A filler for a composite used for dental restoration, consisting of the glass as defined in claim 38.

71. (withdrawn) A composite used for dental restoration, said composite consisting of an epoxy resin and the glass as defined in claim 38, wherein said glass acts as a filler in the composite.

72. (withdrawn) A dental composition comprising the X-ray opaque glass as defined in claim 38.

73. (withdrawn) A method of using the glass as defined in claim 38 for an optical application.

74. (withdrawn) A method of using the glass as defined in claim 38 in display technology.

75. (withdrawn) A method of using the glass as defined in claim 38 for a biomedical application.

76. (withdrawn) A substrate glass for a photovoltaic device, said substrate glass consisting of the glass as defined in claim 38.

77. (withdrawn) A lamp glass consisting of the glass as defined in claim 38.

78. (withdrawn) A target material for a plasma vapor deposition process, consisting of the glass as defined in claim 38.

79. (withdrawn) A glass fiber comprising the glass as defined in claim 38.

80. (withdrawn) A glass fiber for reinforcing concrete, said glass fiber consisting of the glass as defined in claim 38.

81. (currently amended) A X-ray opaque glass with a composition, in mol %, consisting of:

SiO_2	75 - [[98]] 92
Yb_2O_3	0.1 – 25
ZrO_2	0 - 24.9
WO_3	0 - 24.9
La_2O_3	0 - 24.9

Nb_2O_5	0 - 24.9
HfO_2	0 - 24.9
Ta_2O_5	0 - 24.9
Gd_2O_3	0 - 24.9
Lu_2O_3	0 - 24.9
Sc_2O_3	0 - 24.9
Y_2O_3	0 - 24.9
TiO_2	0 - 10
GeO_2	0 - 10
P_2O_5	0 - 10
Li_2O	0 - <10
Na_2O	0 - <10
K_2O	0 - <10
MgO	0 - 10
CaO	0 - 10
SrO	0 - 10
BaO	0 - 10
ZnO	0 - 10
F_2	0 - 5;

wherein Σ $TiO_2+GeO_2+P_2O_5$ is from 0 to < 15 mol %, Σ $Li_2O+ Na_2O+ K_2O$ is from 0 to < 10 mol %, and Σ MgO+CaO+SrO+BaO is from 0 to < 10 mol %.

82. (previously presented) The X-ray opaque glass as defined in claim 81, in the form of a glass powder with a mean grain size of 0.2 μm to 20 μm.

83. (previously presented) The X-ray opaque glass as defined in claim 82, wherein said glass powder has a silanized surface.

84. (new) The X-ray opaque glass as defined in claim 81, wherein said SiO_2 is present in an amount of from 75 to 88.1 mol %.

85. (new) The X-ray opaque glass as defined in claim 38, wherein said SiO_2 is present in an amount of from 75 to 88.1 mol %.

86. (new) The X-ray opaque glass as defined in claim 49, wherein said SiO_2 is present in an amount of from 75 to 88.1 mol %.